

## REMARKS

Claims 1-4, 6, 21-22 and 24-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lal et al. (U.S. Patent No. 5, 580,667) in view of Bertero et al. (U.S. Patent No. 6, 150,015). In response, Applicants amended independent claims 1-2 and 4 to further clarify that the magnetic crystal layer includes a part completely excluding a non-magnetic element out of a lattice of the magnetic crystal layer of the layered polycrystalline structure, and respectfully traverse.

Lal discloses a multilayered medium with a gradient isolation layer. Although Lal has an area of magnetic property, Lal does not disclose or suggest a magnetic crystal layer that includes a part completely excluding a non-magnetic element out of a lattice of the magnetic crystal layer.

Bertero discloses a magnetic recording layer having fine individual magnetic grains which are isolated from one another by a solid segregant. The solid segregant of Bertero is established based on an excess Cr in the CoCrPt based alloy. As a result, Cr atoms of at least the saturation solubility remain within a lattice. When the solubility of Cr atoms is saturated within the lattice, the excess Cr diffuses along the grain boundary. Accordingly, Bertero does not include a part completely excluding a non-magnetic element out of a lattice of the magnetic crystal layer.

Applicants further defined independent claims 1-2 and 4 to clarify that the magnetic crystal layer includes a part completely excluding a non-magnetic element out of a

lattice of the magnetic crystal layer. Since the cited references fail to disclose or suggest a layered polycrystalline structure that includes, among other things, a part completely excluding the non-magnetic element out of the lattice of the magnetic crystal layer, withdrawal of the §103 rejection of claims 1-4, 6, 21-22, and 24-25 is respectfully requested.

Claims 5, 13, and 23 stand rejected under 35 U.S.C. 103(a) as being obvious over Lal in view of Bertero, and further in view of Okumura et al. (U.S. Patent No. 5,700,593). Applicants traverse the rejection of claim 5 for the reasons recited above with respect to the rejection of independent claim 4, and because the Okumura reference fails to overcome the deficiencies of the Lal and Bertero references. Applicants traverse the rejection of claims 13 and 23 because the cited references do not disclose or suggest, among other things, that each nucleation cite is formed of an aggregation of atoms.

The nucleation cites of the present invention are spaced from each other on a surface of a substrate. Thus, the nucleation cites never form a continuous layer. In addition, the discontinuous nucleation cites contribute to a reduction in size of the crystal grains in the continuous crystal layer covering the surface of the substrate. Lal fails to disclose or suggest any discontinuous layer. Furthermore, the formation of a discontinuous layer depends on the material and thickness of the deposited layer. That is, discontinuous layer formation depends on a surface tension or surface energy between a deposited layer and an underlayer receiving the deposited layer. Accordingly, Applicants traverse the Examiner's assertion that Ti layers that are less than 10nm thick will necessarily be discontinuous, and therefore have individual

nucleation cites separated from one another. For this reason, withdrawal of the §103 rejection of independent claim 13 and its respective depending claim 23 is respectfully requested.

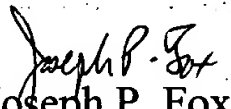
New claim 26 is added and further defines that the "part" recited in claim 1 of the magnetic crystal layer is a magnetic grain. Since the cited references fail to disclose or suggest a magnetic grain that completely excludes a non-magnetic element out of the lattice or magnetic crystal layer, Applicants earnestly solicit allowance of new claim 26.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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